

## **A. The relevant product and geographic markets**

As explained in the preceding sections, the first step in the competitive analysis is to determine the relevant product and geographic markets.

### **1. Product markets**

The Commission has not defined relevant product markets for Internet services in any prior proceeding. A wide variety of services are offered over the Internet. From the demand-side perspective, many capabilities provided by the Internet are provided by other services as well. Some services that can be provided over the Internet, such as intranets, electronic mail and Internet telephony,<sup>96</sup> fall into familiar categories with obvious non-Internet-based substitutes. Any attempt by a hypothetical monopolist to raise the price of these services would only cause potential customers to purchase substitutable services. Other services, such as Internet "chat rooms," Website visitation, and Internet video and radio, face competition from non-Internet alternatives that may not be as close substitutes.<sup>97</sup> Such services may provide some of the capabilities that these Internet services offer, but not the global reach on a scale offered by the Internet.

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<sup>96</sup> Internet telephony services permit real-time voice conversations over the Internet. These services convert voice into data packets, which are then sent over the Internet, and converted back into voice at the receiving end.

<sup>97</sup> Internet "chat room" service allows multiple Internet users to engage in a real-time "conversation" by sending and receiving typed messages as they are typed at a computer. Internet video and radio may blur the distinction between telecommunications and broadcast. A continuous, live, generally available music broadcast over the Internet may become indistinguishable from a traditional radio broadcast. Current technological limitations means that continuous video streams over the Internet are relatively low quality, and easily distinguishable from traditional radio and television images. However, "[a]s compressing technology develops and end-user access speeds increase, Internet video applications will provide service that increasingly resembles the quality of television broadcast stations." Kevin Werbach, "Digital Tornado: The Internet and Telecommunications Policy," OPP Working Paper 29, March 1997, at 42 ("*Digital Tornado*").

The Commission has defined a relevant product market to encompass a group of similar services where each service is a good substitute for another, but where, for the group as a whole, there are no other close substitutes in demand.<sup>98</sup> Purchasers of Internet access generally obtain access to all services provided over the Internet for a flat monthly cost (whether for dial-up or dedicated service). As a result, an ISP generally cannot raise the price of access to Internet services for which less close substitutes exist without simultaneously raising the price of access to Internet services for which close substitutes do exist. The parties are not aware of any empirical analysis that determines whether any Internet services, individually or collectively, are sufficiently different from non-Internet services that the latter do not effectively constrain the pricing of the former.

Some opponents of the merger argue that the relevant market consists of Internet backbone services. *E.g.*, Sprint Comments, at 8. However, as WorldCom and MCI previously demonstrated, there is no generally accepted definition of "Internet backbone," and the difference between an ISP "backbone" provider and other ISPs is at best one of degree. Joint Reply at 69 and n.111. Sprint unintentionally confirms this point when it tries to draw a distinction between two tiers of Internet backbone providers without explaining where the line is drawn, for example, in terms of the extent to which the "core" backbone provider owns or leases transmission capacity or the number of NAPs to which a "core" backbone provider must interconnect. *Id.*, at 7-8. Sprint acknowledges that ISPs vary widely in "size, scope, customer base, web sites, connected [to] their networks, [and] the services they can offer other ISPs." *Id.* at 7.

Internet access services sold to ISPs are no different from Internet access services sold to

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<sup>98</sup> *LEC In-Region Interexchange Order*, 12 FCC Rcd. at 16751, 15777, 15782, ¶¶ 5, 31, and 40.

retail consumers, so the former are part of the same market as the latter. ISPs use the same facilities to provide the same dial-up and dedicated Internet access to other ISPs that they provide to retail customers. ISP customers buy the same access services, provided over identical facilities, as retail customers. The *Bell Atlantic-NYNEX* test is whether, in event of a price rise, "customers would be able to switch to a substitute service offered at a lower price."<sup>99</sup> Any attempt to raise the price of access service to wholesale customers would simply cause wholesale customers to buy the (equivalent) services offered to retail customers. Moreover, ISPs may not even be able to identify whether a customer is a wholesale or a retail customer. In any event, treating Internet access services sold to ISP and to non-ISP customers as separate markets would not affect the competitive analysis because any ISP that provides access to one type of customer can provide access to the other.

For the same reasons, there is no "input" market for Internet access separate from any "end-user" market for Internet access. In defining relevant markets, the Commission may distinguish between "end-user" or final product markets, where the product or service is sold to end-user customers, and "input" markets, where the product or service is sold to firms which use it as an input to supply other products or services. *See supra* pages 49-63. In the *BT-MCI Order*, the Commission highlighted two reasons why consideration of input markets is particularly important when evaluating the impact of a merger where one or both of the parties provides both a service and a necessary input for that service. First, if the merged entity obtains or increases market power over an input, it could raise the price of that input to unaffiliated providers of the service, which could ultimately injure end-users to the extent that suppliers of the final product pass the higher input price

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<sup>99</sup> *Bell Atlantic-NYNEX Order* ¶50.

on to end-users in the form of a higher final product price.<sup>100</sup> Second, if the merged entity obtains or retains market power over an essential input while simultaneously competing downstream in the end-user market, the merged entity "conceivably could injure competition by discriminating against unaffiliated producers of the end-user service."<sup>101</sup> As explained above, ISPs buy the same access services bought by retail customers of Internet services, and any ISP can become a provider of Internet access to other ISPs.

Furthermore, interconnection obtained through peering arrangements does not constitute a market separate from interconnection obtained through other access arrangements. Peering is a technical arrangement by which two ISPs exchange traffic and compensate each other by terminating each other's traffic without any money changing hands - a kind of "barter" arrangement. Joint Reply at 82. Although peering does not include a transit function, a peering arrangement gives an ISP the same access to customers of its peers that it would obtain as their customer, *id.* An ISP that was a customer of another ISP may become a peer of that ISP, and a peer may choose to become a customer instead. Moreover, ISPs may have peering and customer relationships with multiple ISPs. As a result, peering and customer relationships among ISPs have a substantial degree of substitutability.

In defining relevant markets, the Commission considers whether service to different types of customers belong in different markets - for example, residential and small business, medium-sized

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<sup>100</sup> See *BT-MCI*, at ¶¶ 37, 58.

<sup>101</sup> See *id.* at ¶ 58.

business, and large business and government.<sup>102</sup> For Internet services, there is no basis to treat different types of retail customers as separate markets. A break-down of services by customer type is appropriate only where there is "credible evidence suggesting that there is or could be lack of competitive performance" with respect to some segments of the broader market.<sup>103</sup> No such evidence exists with respect to different categories of retail customers of Internet access services. Indeed, all types of customers buy the same dial-up and dedicated services. Moreover, many residential as well as business customers are extremely sophisticated users of Internet services, and considerable information exists about the relative quality and cost of Internet services.<sup>104</sup> All segments contain substantial numbers of customers that shop around for the best available deal from alternative sellers.

Moreover, as discussed below, supply-side substitutability blurs any distinctions between types of customers and eliminates any possibility that an ISP could exercise monopoly power with respect to some but not all segments. ISPs that currently market only to retail customers can easily market to ISPs, which buy the same service purchased by retail customers. Similarly, business customers buy both dial-up and dedicated access services, and an ISP that offers these services to business customers can also offer them to residential customers.

Finally, the provision of interconnection through Network Access Points ("NAPs") does not constitute a separate market. NAP providers provide a mechanism for multiple ISPs to exchange

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<sup>102</sup> *Bell Atlantic-NYNEX*, ¶ 53 (discussing the local exchange market).

<sup>103</sup> *LEC In-Region Interexchange Order*, ¶ 40.

<sup>104</sup> The merger will not affect competition to provide Internet services to residential customers in this respect because WorldCom has only limited brand name recognition. Moreover, only a small percentage of residential customers buy Internet access directly from WorldCom and MCI.

traffic with each other. Especially for ISPs that exchange small volumes of traffic, interconnection through a NAP may be cost-effective. However, ISPs also can and do establish direct connections to exchange traffic, and the percentage of traffic exchanged through NAPs has declined as ISPs have increasingly exchanged traffic through direct connections. As the volume of Internet traffic continues to grow rapidly, more and more ISPs are likely to exchange a sufficient volume of traffic to justify direct connections as a substitute for connection through NAPs.

## **2. The relevant geographic market**

The relevant market for Internet services is national in geographic scope. Where "the competitive conditions for a particular service in any point-to-point market are sufficiently representative of the competitive conditions for that service in all other domestic point-to-point markets, then we will examine aggregate data, rather than data particular to each domestic point-to-point market."<sup>105</sup> A national approach should be used unless there is "credible evidence that there is or could be a lack of competitive performance in any point-to-point market."<sup>106</sup> Here, no credible evidence justifies breaking any Internet market into geographic sub-markets, nor would such an approach make any practical difference in analysis of this merger.

The Internet is "simultaneously local, national, and global, and is almost infinitely plastic in terms of the services it can support."<sup>107</sup> Internet services are provisioned, marketed, priced, sold, and advertised on this basis. No geographic barriers to entry or expansion prevent an ISP that serves

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<sup>105</sup> *LEC In-Region Interexchange Order* at ¶ 66.

<sup>106</sup> *Id.*

<sup>107</sup> Werbach, *Digital Tornado* at 26.

customers in one geographic area from serving customers in other areas. It is presumably for these reasons that "GTE assumes that the geographic market for backbone services is national[.]" GTE Comments at 71.

**B. Market participants**

The second step in the Commission's competitive analysis is to identify current and potential participants in the relevant market, especially those that are likely to have a significant competitive effect.<sup>108</sup> Virtually every domestic and foreign communications company in the world is participating, or is preparing to participate, in the unprecedented explosion of Internet-based services. See Joint Reply at 74. New ISPs are created on a regular basis to take advantage of the opportunities offered by the emergence of new Internet applications and capabilities. More specifically, numerous ISPs operate backbone networks, and the number is growing as Internet traffic increases. Current and future providers of Internet services include companies offering only these services, interexchange carriers, cable companies, satellite companies, the BOCs, and utilities. As the Commission knows, the BOCs are currently "precluded competitors" with respect to the provision of Internet backbone services on an interLATA basis within their regions, and they are seeking in-region interLATA authority both under § 271 and under § 706 of the 1996 Act.

**C. The effect of the merger on competition**

In the *Bell Atlantic-NYNEX Order*, the Commission concluded that the most significant issue in a merger case is "the extent to which the merger is likely to affect future market structure, conduct

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<sup>108</sup> *BT-MCI*, at ¶ 36.

and performance."<sup>109</sup> Here, the merger will not and could not retard the relentless competitive forces driving exponential growth and continued innovation in Internet services.

It may be useful to summarize at the outset the principles that are *not* disputed by the petitioners:

- o Universal connectivity is an absolute requirement for all ISPs, large as well as small. If an ISP cannot offer its customers connectivity to all of the thousands of networks that make up the Internet, it is not an ISP. Even in GTE's view of the world, MCI WorldCom will be sending as much traffic to other ISPs as those ISPs will be sending to MCI WorldCom. Thus, no critic of the merger claims that MCI WorldCom would refuse to interconnect with any ISP -- which would completely strip MCI WorldCom of the global connectivity its customers demand.
- o Merger or no merger, ISPs will continue to use compatible systems based on a common communications protocol, TCP/IP ("Transmission Control Protocol/Internet Protocol"), to achieve universal connectivity. Firms like AT&T, America Online, and CompuServe that previously used closed systems have migrated to the Internet. No critic of the merger claims that MCI WorldCom would move to a closed system.
- o Competition among ISPs is currently vigorous. Simply Internet agrees that "[t]he level of competition among [ISPs] . . . is intense." Simply Internet Comments, at ii. No critic contends that the current price of Internet access, whether offered to ISPs or end users, is not competitive. See Joint Reply at 74.

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<sup>109</sup> *Bell Atlantic/NYNEX*, at ¶ 98.

- o Peering makes sense only when ISPs exchange roughly comparable amounts of traffic and have added approximately the same amount of incremental capacity to their networks as a result of the peering arrangement. As GTE states, "[t]hese arrangements may be viewed as payments-in-kind." *Harris Internet Aff.* at 7 ¶ 18; *Sprint Comments*, at 7 (peering is "essential a 'bill-and-keep' system"). If one peer does not provide equivalent value, the payment is unequal and inefficient free-riding occurs. *Sprint Comments*, at 8 ("Because [ISPs that have invested in backbones] offer services to [ISPs that have not invested in backbones] that are costly to provide, the [latter] must pay for interconnection to the [former's] networks."). In particular, no critic of the merger claims that any of the requirements in WorldCom's or MCI's current peering policy is unreasonable or inconsistent with the basic nature of a peering relationship -- or significantly different from the peering policies of GTE and Sprint. At the request of Commission staff, WorldCom and MCI are attaching the peering policies that are presently in place; of course, these peering policies have evolved as the Internet has evolved, and they will continue to change as the market continues to change and as other ISPs continue to change their peering policies.
- o The cost of constructing a backbone network does not create a significant barrier to entry. *See Harris Internet Aff.* at 23 ¶ 62. According to Sprint, Internet backbone facilities "are basic, 'garden variety' transmission facilities indistinguishable from those used to carry traffic on the PSTN," *Sprint Comments*, at ii, and transmission capacity is available on a competitive basis from a wide and growing variety of interexchange carriers, including Sprint and GTE. Moreover, many ISPs have purchased routers and other equipment from manufacturers, and no manufacturer is affiliated with WorldCom or MCI. *See Joint Reply*

at 69-70, 71-73. Even if constructing a national backbone network may end up costing "hundreds of millions of dollars" (Sprint Comments, at 17), that is an investment that several ISPs (including Sprint and GTE) have made, and new entrants like Level 3 are continuing to make, to compete in a market that had about \$5 billion in revenues in 1997 and is growing exponentially. *See* Joint Reply at 76 & nn. 123-24. A barrier to entry is properly defined as a cost that new entrants incur that prior entrants did not incur, *Second Carlton/Sider Decl.*, at 10, and new providers of backbone services need not spend more than current providers, and may indeed spend less because the cost of switching equipment and transmission capacity is declining. Joint Reply at 34-36, 72-73.

- o The merger would not increase concentration among owners or operators of NAPs since MCI does not own or operate any NAPs. No critic of the merger contends that WorldCom has discriminated against unaffiliated ISPs in its administration of the MAEs.

The premise of GTE's and other opponents' opposition to the merger as it relates to the Internet is that MCI WorldCom will control roughly 50 percent of Internet traffic because half of the traffic originates and terminates to retail and ISP customers of MCI WorldCom that can be reached only over MCI WorldCom's backbone network. The conclusion that these petitioners would derive from this premise is that MCI WorldCom would have market power that it would exercise in two principal ways: (1) MCI WorldCom would overcharge for interconnection to its network, by forcing ISPs to become paying customers when they ought to be allowed to peer with MCI WorldCom, and by charging inflated prices to wholesale, and presumably, retail customers; and (2) MCI WorldCom would serially degrade the quality of interconnection provided to ISPs so that their customers would switch to MCI WorldCom to escape the consequences of these predatory tactics. Neither the

premise, nor the conclusions, are valid.<sup>110</sup>

First, MCI WorldCom's market share would be approximately 20 percent, not 50 percent or anywhere close to 50 percent. Nothing in the latest round of comments rebuts WorldCom and MCI's showing that revenues provide the best, and best available, measure of market share and market significance, and based on revenues, the merged company's market share would be approximately 20 percent.<sup>111</sup> Joint Reply at 76-77. GTE acknowledges that revenues are a "typical approach" to measurement of market share, but it contends that revenue is not appropriate here because ISPs that provide retail services also provide backbone services. Harris Internet Aff. at 15 ¶ 43. However, this criticism rests on the fallacious premise that Internet access and connectivity

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<sup>110</sup> The Commission considers whether a proposed merger would increase the likelihood of coordinated action in any relevant market. *Department of Justice and Federal Commission 1992 Horizontal Merger Guidelines*, 57 Fed. Reg. 45552, 45559-50 §§ 2.0, 2.1 (Sept. 10, 1992) ("Merger Guidelines"). No petitioner has suggested that the merger of WorldCom will have any such effect in any Internet-related market, and it would not. Analysis of the prospects for coordinated behavior "would typically consider the availability of excess capacity, market growth, and barriers to entry." Application of Motorola, Inc., Transferor, and American Mobile Satellite Corporation, Transferee, For Consent to Transfer Control of Ardis Company, *Memorandum Opinion and Order*, ¶ 64, CWD No. 98-3, DA 98-514 (rel. March 16, 1998, Wireless Telecommunications Bureau). Here, entry is easy, new entrants are rapidly increasing capacity, and the market is rapidly expanding. Furthermore, Internet services are unregulated and sold on terms and conditions that need not be publicly filed or disclosed to sophisticated customers that can and do play potential suppliers off against each other.

<sup>111</sup> The Merger Guidelines describe general principles for selection of "the best indicator of firms' future competitive significance," *Merger Guidelines*, 57 Fed. Reg. at 41552 § 1.41, but their application to the Internet is unclear. For example, the Guidelines provide:

Dollar sales . . . generally will be used if firms are distinguished primarily by differentiation of their products. Unit sales generally will be used if firms are distinguished primarily on the basis of their relative advantages in serving different buyers or groups of buyers. Physical capacity or reserves generally will be used if it is these measures that most effectively distinguish firms. *Id.*

provided to retail customers is in a different market than exactly the same service and functionality provided to ISPs. The revenue collected from both retail and ISP customers for Internet access (whether dedicated or dial-up) covers the cost of the underlying Internet backbone used to provide service to all types of customers.

GTE also claims that revenues understate the amount of backbone service provided because some ISPs get discounts based on term and volume. Harris Internet Aff., at 15, ¶ 43. But ISPs offer discounts (to retail as well as ISP customers on the same basis), and must offer discounts to remain competitive, so this factor in general affects the share of all ISPs equally. That is why revenue is a standard measure of market share even though it is true in virtually all markets that some customers qualify for discounts. Although revenue does not directly reflect traffic exchanged among peers that are compensated in kind rather than in cash, the large percentage of all Internet traffic for which the several dozen ISPs that engage in peering likely account means that adjusting for this factor would not significantly affect relative market shares or the overall HHI, and revenues received that backbone providers receive from ISP and non-ISP customers cover the investment associated with the traffic exchanged through peering arrangements.

GTE's final criticism of a revenue-based measurement is that WorldCom and MCI calculated their share of the market for Internet access services based on revenues that included other services. Harris Internet Aff., at 15-16 ¶¶ 45-46. WorldCom and MCI did not include revenues from services other than Internet access services in the numerator, which include their own revenues. The Frost & Sullivan study on which we relied to estimate the total size of the Internet market (Joint Reply, at 76 n.124) excludes revenues from advertising and host-based services, and although it may include some revenues associated with services other than Internet access, it is doubtful, based on

WorldCom's and MCI's experience and knowledge of the business, that these revenues constitute a major portion of the reported revenues or that subtraction of them would significantly affect total market share.

No alternative measure of market share is superior to a revenue-based approach. Another approach would be to measure market shares based on the volume of traffic that ISPs carry. Harris Internet Aff., at 16 ¶ 47. But this data is simply not available because the thousands of firms in this unregulated market do not publicly disclose traffic data at all, much less on a timely and methodologically consistent basis. *Id.* In any event, statistically valid techniques to measure traffic and traffic flows do not currently exist. The Cooperative Association for Internet Data Analysis ("CAIDA"), an organization of Internet participants trying to develop traffic measurement and analysis tools, told the Commission that "[t]he lack of reliable traffic information is ubiquitous in the Internet sector... [W]ith few exceptions, measurement or characterization of traffic within or between networks is minimal today; and the relevance of data that government agencies are currently collecting about Internet traffic flows is 'limited.'"<sup>112</sup> In addition, a packet may flow over multiple networks on its way from the sender to the receiver, so measurements based on total traffic would involve significant double-counting, triple-counting, or more. It is doubtless true that if all traffic carried by all ISPs were added up, the total would exceed 100 percent because most traffic is carried by at least two ISPs - and would continue to be post-merger.

Capacity is not a better measure than revenues because (1) capacity can be rapidly expanded

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<sup>112</sup> Comments by CAIDA Concerning the FCC's Review of the Acquisition of MCI Communications Corporation by WorldCom, Inc., March 13, 1998 <<http://www.caida.org/presentations>>).

in a market where customers can easily change ISPs (Joint Reply, at 72-73), and (2) complete, reliable, and consistent information about current capacity is not available. Harris Internet Aff., at 17 ¶ 48.

Connections also constitute a flawed measure. Joint Reply at 75. The approach used by GTE based on connections and bandwidth illustrates why this is true. In one of its calculations, GTE uses a data set (collected through a survey whose methodology is unknown) concerning connections among less than half of all domestic ISPs - the 1,700 smallest ISPs out of more than 4,000. Harris Internet Aff., at 17-18 & nn. 21-22. However, as we previously explained, an ISP that has connections to 100 ISPs each of which has 10 customers would not have greater competitive significance than an ISP with connections to 10 ISPs each of which has 1,000 customers of the same size as the customers of the 100 ISPs connected to the first ISP. WorldCom/MCI Reply Comments, at 75. Moreover, the smallest ISPs are least likely to connect to more than one backbone provider, and the total number of backbone providers to which they connect is likely to be smaller. So even if GTE accurately corrects for these ISPs for the size and double-counting effects described in the Joint Reply (at 72), the effect may be different when larger ISPs more likely to have more connections are considered.

Moreover, GTE's choice to add multiple connections to both the numerator and the denominator incorrectly suggests greater "control" of access to customers than actually exists. If, for example, an ISP connects to both MCI WorldCom and another ISP and could therefore exchange traffic with the ISP directly as well as through MCI WorldCom, MCI WorldCom would have no "control" of access to the second ISP and its customers, and both ISPs could easily avoid any attempt by MCI WorldCom to take advantage of either ISP. Indeed, because any ISP can easily establish

a connection with another ISP to which it is not currently connected directly (through either a customer or peering relationship), no ISP, including MCI WorldCom, can "control" access to any other ISP or its customers.

In sum, there is no demonstrably precise, complete and reliable market data for Internet services. As GTE's expert candidly states, "measuring market shares of Internet backbone service providers is a difficult issue because the industry is so new, is growing so fast, and is so dependent on proprietary data and technologies that finding verifiable public data is almost impossible." Harris Internet Aff., at 14 ¶ 41; *see* Sprint Comments, at iii, 8 and 9. However, for the reasons discussed above, WorldCom and MCI submit that revenues provide the best available measure of competitive significance of an ISP. The opponents of the merger in effect contend that the unavailability to anyone of perfect information about market size and shares means that the Commission cannot rule out the possibility of anticompetitive effects and must therefore disapprove or condition the merger with respect to Internet access services. At a minimum, opponents of the merger have failed to prove that the measures on which they rely to estimate an MCI WorldCom market share of up to 50% are superior, and in the context of an Internet merger, the burden should be on the opponents to show that the merger would have anticompetitive effects. *See supra* page 64.

Uncertainty about Internet market shares is significant for competitive as well as legal reasons. MCI WorldCom would not embark on a hypothetical predatory strategy even if it knew it had 50 percent of the relevant market, and this strategy would be even more irrational if there were a substantial likelihood, and indeed a probability, that the merged company has less than a third and indeed only a fifth of the alleged market. Especially in these circumstances, no company would take the risk that overcharging ISPs for access, and degrading the quality of interconnection with them,

would only trigger a massive loss of business. This whole line of argument says a lot more about the mindset of a de facto monopolist than it does about any successful entrepreneurial competitors like MCI and WorldCom.

Because MCI WorldCom's market share would be approximately 20 percent, the merger poses no competitive threat. None of the opponents contends that the network externalities effect on which they rely would exist if the share of the merged company were only 20 percent - or any share substantially less than half of the market.

*Second*, the specter of overcharging for access arises if, and only if, MCI WorldCom would peer with no one. If MCI WorldCom continues to peer with the ISPs with which MCI and WorldCom currently peer, or even with a fraction of these ISPs, other ISPs could easily avoid MCI WorldCom's attempt to charge inflated prices for interconnection. If the merged company tried to force an ISP into a paid customer relationship when a peering relationship was appropriate, or to pay more than it should as a customer, the ISP could still give its customers the ability to exchange traffic with MCI WorldCom's customers *without* becoming a customer of MCI WorldCom. The ISP could achieve the same interconnectivity with MCI WorldCom's customers by interconnecting via dedicated access with an ISP that peered with MCI WorldCom. MCI WorldCom's peers would take advantage of any opportunity to win both ISP and retail customers away from MCI WorldCom by offering them a lower, competitive price for the same connectivity they would get as MCI WorldCom's customers. Thus, any attempt by MCI WorldCom to overcharge ISP customers would simply benefit ISPs with which MCI WorldCom did peer - with no benefit to MCI WorldCom.

MCI WorldCom would not have any incentive to terminate all peering agreements because the same factors that make peering efficient today would continue to exist post-merger. Where

interconnection via peering involves an equivalency of obligation, it makes sense for ISPs to establish a relationship where no money changes hands, which simplifies the relationship and avoids the significant costs for the development of measurement and billing systems and for computer capacity to run those systems on an ongoing basis. *See* Joint Reply, at 82-83; Second Carlton/Sider Decl. ¶ 76. Eliminating peering would therefore impose costs on MCI WorldCom, and not only on its rivals.

As WorldCom and MCI previously explained without dispute from any petitioner, two ISPs need not have the same revenues or the same number of customers for each to want a peering relationship. Joint Reply, at 84. Peering offers an efficient means for both parties to interconnect. The same incentives that MCI and WorldCom each currently has to peer will continue to exist post-merger. MCI WorldCom will need to interconnect with other ISPs, just as other ISPs need to interconnect with MCI WorldCom. That is why the merger parties have no present intention to cease peering with ISPs where peering is mutually beneficial.

*Third*, any attempt to overcharge ISP customers would only encourage them to use one of a variety of alternative means to achieve interconnection and minimize use of MCI WorldCom's network. A significant percentage of the alleged combined market share of WorldCom and MCI comes from ISP customers. If MCI WorldCom lost its ISP customers, its total market share would shrink, causing it to lose its alleged market power even under the petitioners' theory. MCI WorldCom would therefore have a substantial incentive not to give ISP customers a reason to want to switch, thereby avoiding the revenue and market share loss that would defeat the whole purpose of the tactics alleged by the petitioners.

Any attempt to exploit ISP customers that have customer relationships would give these

customers a powerful reason to minimize the traffic exchanged via MCI WorldCom and to bypass MCI WorldCom's network to the maximum extent possible. They could do this, for example, by peering with each other. If the price of using MCI WorldCom's backbone network became unreasonably high, ISPs could construct their own. While that investment would not be necessary as long as MCI WorldCom charged a cost-based price for use of its backbone, the cost-benefit analysis would change if MCI WorldCom raised its price. Since construction of an Internet backbone is relatively easy and the market can support multiple efficient competitors, some ISPs would decide to pursue this strategy. The result would be that traffic that previously flowed over MCI WorldCom's network would no longer do so, and any alleged leverage that the former volume of traffic created would dissipate.

As an alternative to constructing its own backbone network and peering with other ISPs, an ISP victimized by MCI WorldCom could respond by becoming a dedicated access customer of one or more other ISPs instead of MCI WorldCom. That would permit it to bypass completely the MCI WorldCom network for traffic exchanged with ISPs other than MCI WorldCom.

The only response of petitioners like Bell Atlantic is that switching backbone providers can be costly for some ISPs. As WorldCom and MCI demonstrated previously, however, IP address changes are not a meaningful obstacle. The simplest and most direct proof of this proposition is not contested by any of the petitioners: ISP customers as well as retail customers change backbone providers on a regular basis. Both WorldCom and MCI experience churn among ISP and non-ISP customers for Internet access service. MCI's and WorldCom's customers change ISPs now when they decide they have a reason to change, and they will continue to do so after the merger. *See Joint Reply*, at 79. This churn exists because changing ISPs (or backbone providers) is generally

straightforward and relatively inexpensive: many ISP customers use software that permits the dynamic assignment of addresses and makes the change essentially invisible to the customer; and larger ISPs (that can reasonably be assumed to account for a substantial majority of Internet traffic) qualify under IANA guidelines for "portable IP addresses," and can transfer their IP addresses to new ISPs if they choose to do so. At most, numbering issues affect a small portion of the "market," but they can and do change backbone providers, and with only moderately more effort than other categories of ISP customers. *See* Joint Reply, at 79-80.

For the predatory strategy posited by Bell Atlantic to fail, it is not necessary that each and every ISP be able to change backbone providers without significant cost. This strategy becomes unprofitable, even on the petitioners' own terms, if a substantial percentage of ISPs are not in any significant way locked into MCI WorldCom for backbone services. Because it is easy for such a large percentage of ISPs to change, the loss of all profits from the ISPs that do change would substantially exceed any incremental increase in profits from the ISPs that stayed even though they were paying supracompetitive prices.

The effect of these responses in a competitive marketplace where construction of Internet backbones, and establishment of alternative routes, are relatively easy would be a steady, irreversible attrition in MCI WorldCom's traffic and market share. Any attempt by MCI WorldCom to exploit customers allegedly locked in would only backfire because potential new customers would choose competitors instead to avoid the problem. It is worth emphasizing that the penalty is especially severe because the Internet "market" is doubling at least every twelve months - even if customers keep existing traffic on MCI WorldCom's backbone and shift only the increased traffic to competitors, it would take MCI WorldCom less than a year to see its market share cut in half. The

strategy invented by opponents of the merger would therefore cause MCI WorldCom to prevent itself from sharing in a substantial part of the spectacular growth that has attracted so many firms to provide Internet services. The ability of customers to change ISPs means that MCI WorldCom would not try to take advantage of them and trigger the resulting market backlash. It is therefore ludicrous to contend that MCI WorldCom would pursue such a counterproductive and self-defeating strategy.

*Fourth*, the cost and risk of the strategy that opponents contend MCI WorldCom would pursue are magnified by the very effect on which these opponents rely. As they emphasize, the more people use the Internet, the more valuable it is to each user. The growth of the Internet as a whole thus makes the Internet service provided by MCI WorldCom more valuable to MCI WorldCom's customers. Under the inexorable law of supply and demand (and no one contends any market for Internet services is price-inelastic), increasing the cost of access reduces the number of users. As a result, even if one assumes that MCI WorldCom had market power and could charge a price above competitive levels, setting the price of access too high would have a double negative effect. First, it would reduce total profits because lost profits from lost sales would exceed increased profit on the sales that MCI WorldCom was able to make. Second, and above and beyond this effect in non-networked services, this strategy would reduce the value of Internet connectivity by reducing the number of Internet users.

Such a strategy would therefore be contrary to MCI WorldCom's interests because it would discourage potential customers from using the network: "today's potential customers are more likely to join the network, the more attractive terms they expect will be offered in the future to attract more

members at that time."<sup>113</sup> In such a dynamic and developing portion of the market, MCI WorldCom would have no practical way of calibrating the price increase to ensure that it was profitable rather than unprofitable - to gauge a price increase that was high enough to justify the backlash by customers that would look for ways to reduce their use of MCI WorldCom, but not so high that it reduced the overall value of Internet connectivity and thus the price that MCI WorldCom could charge. Because even a small price increase would be so likely to be counterproductive, the only rational course would be to continue to charge competitive prices.

*Fifth*, another reason why any scheme to raise Internet prices would be self-defeating and self-correcting is that it would give rival ISPs an opportunity to capture retail - and not just wholesale - share at MCI WorldCom's expense. The alleged scheme would therefore cost MCI WorldCom not only lost profits from lost retail customers, but also any alleged market power over other ISPs that derives from its retail market share. If MCI WorldCom had market power with respect to Internet access, it would presumably attempt to exercise that market power over retail as well as ISP customers. But competing ISPs can compete for every single customer of MCI WorldCom, and no customer is safe from competitors. Unlike the ILECs, MCI WorldCom does not control any bottleneck to any customer.

*Sixth*, attempting to take advantage of Internet customers would harm MCI WorldCom's reputation as a full-service provider and therefore cause loss of sales of non-Internet services to customers that concluded that they could not trust MCI WorldCom. Internet services are only one portion of MCI WorldCom's total portfolio of services. A reputation for tampering with the Internet

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<sup>113</sup> Katz & Shapiro, "Systems Competition and Network Effects," at 105, Journal of Economic Perspectives (1994).

would affect MCI WorldCom's ability to sell non-Internet as well as Internet services, thereby increasing the unprofitability of any attempt to raise the price of Internet access. "[A] firm that offers a broad product line, or is otherwise seen as taking a long-run perspective, may refrain from exploiting its installed base for fear of losing future sales in either the systems market itself or the other markets in which the firm is active."<sup>114</sup>

*Seventh*, in addition to the contention that MCI WorldCom would overcharge interconnected ISPs for access, GTE concocts a truly bizarre and unreal scenario in which MCI WorldCom would degrade the quality of interconnection with its rivals. *Harris Internet Aff.*, at 26 ¶ 70. In this "serial killer" scheme, MCI WorldCom would "pick off" competing backbones in a serial sequence by degrading their service one at a time in an attempt to gain market share by inducing their customers to switch to the MCI/WorldCom backbone." *Id.* As GTE admits, "[t]here is no question that if MCI/WorldCom degraded interconnection service to other backbones it would harm its own ISP and end user customers as well as the customers of other backbones." *Id.*, at 27 ¶ 72. Even GTE recognizes that it would make no sense simultaneously to degrade interconnection to all interconnected ISPs because that would degrade the quality of MCI's own service as much as it degraded the quality of service provided by competing backbones. But GTE contends that "[t]his effect could be minimized . . . by targeting backbones one at a time where the degraded service would have a small effect on MCI/WorldCom's service, but a devastating effect on the service of the smaller backbone." *Id.*

Wholly unexplained is how MCI WorldCom would orchestrate this scheme, with the

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<sup>114</sup> *Id.*, at 104.

exquisite timing it would require: how long, for example, would MCI WorldCom degrade interconnections with GTE before it moved on to another one of the thirty-plus backbone providers? It would have to degrade service long enough for GTE's (and therefore MCI WorldCom's) customers to notice, but not long enough that GTE's customers would switch to backbone providers other than MCI WorldCom whose interconnections MCI WorldCom was not then sabotaging. Given the number of backbone providers and the ease of entry, by the time MCI WorldCom knocked off competing providers one by one, new ones would have sprung up to take their place. And the only ISP whose customers would consistently experience degraded service would be MCI WorldCom - creating a huge marketing opportunity for its competitors. The notion that the Internet community would sit passively by while its members were picked off one by one is outlandish. Such a ploy would only trigger a stampede away from any ISP foolish enough to attempt it.

Finally, some of the commenters contend that WorldCom's operation of several NAPs requires that the merger be blocked or conditioned. *See, e.g.,* GTE Comments, at 79-80. Of course, since MCI does not own or operate any NAP, the merger will not affect concentration in the ownership of NAPs. If MCI WorldCom tried to provide inferior service or charge higher prices to unaffiliated ISPs that connected to NAPs that it operated, the only likely result would be that those ISPs would chose to peer at other NAPs (and many already peer at multiple NAPs), or to create new NAPs, or to connect directly without going through any NAP.<sup>115</sup> *See* WorldCom/MCI Reply

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<sup>115</sup> Sprint laments that "although [the merger parties] claim that the cost of establishing a NAP is low, they offer no cost data to document such claim." Sprint Comments, at 7 n.4. Sprint, of course, operates a NAP, and if the parties' claim were unfounded, Sprint has ample access to the cost data needed to rebut it. The proliferation of NAPs is proof enough that no significant barriers prevent creation of additional NAPs. *See* Joint Reply at 86-87. The pace of proliferation would only increase if MCI WorldCom gave ISPs an incentive to bypass its network by interconnecting directly

Comments, at 87.

In summary, competition in Internet services would not permit MCI WorldCom to achieve or exercise market power. Three factors combine to make the doomsday scenarios posited by the opponents of the merger wholly irrational and counterproductive: (1) the ability of the multiple ISPs with existing backbones to expand them, and of other ISPs to construct such networks with substantial capacity; (2) standard protocols for interconnection that ensure that all participants in the Internet can achieve global connectivity; and (3) the ability of relatively large and sophisticated customers to switch quickly away from any ISP that attempts to take advantage of them through inflated prices or inferior service.

MCI and WorldCom have been pioneers in the Internet. Before other companies recognized the Internet's potential, MCI and WorldCom made substantial investments that helped the Internet to achieve its current stature and acceptance. As has been true with long distance services, and as will be true for local services, the growth of the Internet and the success of individual ISPs encourage, not discourage, additional entry. MCI WorldCom would not be able to stem the tide of new entry even if it wanted to. And the Internet is a phenomenon in which growth through competition benefits all participants, because increased usage makes the Internet even more valuable to all.

In such a market, and against such a background, the last strategy that MCI WorldCom would pursue is one that would jeopardize all of the investment and the goodwill that WorldCom and MCI have so painstakingly built up. A reputation in the Internet community as a "maverick"

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with each other.

that refused to exchange traffic on reasonable and efficient terms would quickly kill MCI WorldCom's chances to continue to participate in the growth of the Internet. The success in Internet services that WorldCom and MCI have achieved to date has come by giving their customers what they demand: reliable connectivity at fair prices. That is the strategy that MCI WorldCom will continue to pursue.

In its further comments, Telstra claims that MCI/WorldCom's initial Joint Reply "provides no additional factual information regarding the terms on which off-shore ISPs will have access to the post merger company's Internet backbone and switching facilities."<sup>116</sup> In its Joint Reply, MCI/WorldCom fully responded to Telstra's comments. MCI/WorldCom stated that, in response to marketplace demand, MCI, WorldCom, and other U.S. ISP backbone providers offer foreign ISPs interconnection with their networks at the same price, and on the same terms and conditions that they offer to domestic ISPs.<sup>117</sup>

Telstra also claims that "WorldCom and MCI have yet to show that requiring Telstra and other off-shore ISPs to pay the full cost of Internet access is a reasonable and non-discriminatory practice under the Communications Act when that traffic is carried in both directions."<sup>118</sup> As the Applicants indicated in the Joint Reply, Telstra continues to seek a regulatory solution for a commercial issue for which commercial solutions are already available.<sup>119</sup>

In any event, the issues raised by Telstra are completely unrelated to the merger of MCI and

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<sup>116</sup> Telstra Comments at 6

<sup>117</sup> Joint Reply at 90.

<sup>118</sup> Telstra Comments at 6.

<sup>119</sup> Joint Reply at 91.